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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,818	09/16/2003	Gordon G. Guay	08935-298001 / M-5032	3443

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EXAMINER
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CHUO, TONY SHENG HSIANG

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/664,818

Applicant(s)

GUAY, GORDON G.

Examiner

Tony Chuo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/30/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 1-19 are currently pending. Claims 1-19 do overcome the previously stated 102 and 103 rejections. The objection to the specification is withdrawn. The objection to the drawings is withdrawn. However, upon further considerations, claims 1-19 are rejected under the following new 102 and 103 rejections. In addition, the indicated allowability of claims 4 and 13 is withdrawn in view of the newly discovered reference(s) to Gore et al. Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Gore et al (US 2004/0202904). The Gore reference discloses a method of operating a fuel cell system comprising disposing a fuel cartridge "306" into a compartment of an electrical apparatus "100" such that a portion of a wall "336" of a housing "330" that is comprised of a metal material is placed in thermal communication with a heating element "308" in the electrical apparatus that enables a vapor phase of an oxidizable

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fuel compound "370" in the housing to egress from the cartridge (See paragraphs [0028],[0061],[0062],[0069]).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gore et al (US 2004/0202904) in view of Hockaday et al (US 2002/0182459). The Gore reference discloses a fuel cartridge "306" comprising: a housing "330" having a top wall "336" being comprised of a thermally conductive material such as aluminum metal; gas vents "338" that are supported by the top wall of the housing; and side walls "332" that are comprised of a thermally insulating material such as plastic wherein the cartridge contains a fuel compound "370" (See paragraphs [0061],[0062],[0069]). However, Gore et al does not expressly teach a surface area enhanced planar vaporization membrane residing in the fuel cartridge; a liquid source of fuel that is methanol; and a portion of a wall of the housing being comprised of a thermally conductive material that sinks heat to enhance a delivery of methanol in a vapor phase across the membrane. The Hockaday reference discloses a fuel container "7" comprising a selectively permeable membrane "2" and a fuel that is methanol (See paragraph [0066]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gore fuel cartridge to include a surface area enhanced planar vaporization

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membrane residing in the fuel cartridge; a liquid source of fuel that is methanol; and a portion of a wall of the housing being comprised of a thermally conductive material that sinks heat to enhance a delivery of methanol in a vapor phase across the membrane in order to utilize a safe and convenient source of hydrogen fuel for fuel cells at a low cost especially in portable power applications.

6. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gore et al (US 2004/0202904) in view of Hockaday et al (US 2002/0182459). The Gore reference is applied to claims 16 and 17 for reasons stated above. However, Gore et al does not expressly teach an oxidizable fuel that is methanol and step of disposing a fuel cartridge that permits heat that is generated by the heating generating component in the electronic device to increase a vapor pressure of the fuel in the housing to cause the fuel to egress from the cartridge as a vapor. The Hockaday reference discloses a fuel container that contains methanol as the fuel source (See paragraph [0066]). Examiner's note: If the Gore fuel cartridge contains methanol as the fuel source, the heating element in the cartridge would implicitly increase the vapor pressure of the fuel in the housing to cause the fuel to egress from the cartridge as a vapor. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gore method of operating a fuel cell system to include an oxidizable fuel that is methanol and step of disposing a fuel cartridge that permits heat that is generated by the heating generating component in the electronic device to increase a vapor pressure of the fuel in the housing to cause the fuel to

egress from the cartridge as a vapor in order to utilize a safe and convenient source of hydrogen fuel for fuel cells at a low cost especially in portable power applications.

### ***Response to Arguments***

7. Applicant's arguments, see Remarks, filed 9/6/06, with respect to the rejection(s) of claim(s) 1-3, 5-12, and 14-19 under the previously stated 102 and 103 rejections have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, new ground(s) of rejection are made in view of Gore et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Chuo whose telephone number is (571) 272-0717. The examiner can normally be reached on M-F, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's trainer, Susy Tsang-Foster can be reached on (571) 272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC

A handwritten signature in black ink, appearing to read "Susy Tsang-Foster", written in a cursive style.

**SUSY TSANG-FOSTER  
PRIMARY EXAMINER**